

Claims

1. (Currently Amended): A method for processing an image, comprising the steps of:
comparing a first image intensity associated with a subject image portion with a second
image intensity associated with an adjacent image portion;
determining an image intensity difference between the first image intensity and the second
image intensity;
classifying the subject image portion as a candidate edge portion in response to a
determination that the first image intensity is less than the second image intensity and a
determination that the image intensity difference is greater than a predetermined threshold
image intensity difference;
determining whether the adjacent image portion is a non-edge portion;
determining whether the candidate edge portion is a true edge portion; and
enhancing the true edge portion by increasing the difference between the true edge portion
and the non-edge portion~~associating the subject image portion with a third image~~
~~intensity~~, wherein the third image intensity is less than the first image intensity, thereby
sharpening the true edge portion.
2. (Original): The method of Claim 1, wherein the step of determining whether the candidate
edge portion is a true edge portion, comprises the step of determining whether the candidate
edge portion is adjacent to at least one second candidate edge portion.
3. (Original): The method of Claim 2, wherein the step of determining whether the candidate
edge portion is a true edge portion, further comprises the step of determining whether the
candidate edge portion is adjacent to the second candidate edge portion and to a third
candidate edge portion.
4. (Previously Amended): The method of Claim 3, wherein the candidate edge portion, the
second candidate edge portion and the third candidate edge portion form a line.
5. (Original): The method of Claim 1, wherein the image is a digitized image.

6. (Original): The method of Claim 5, wherein the subject image portion is a pixel.
7. (Original): The method of Claim 5, wherein the adjacent image portion is a pixel.
8. (Original): The method of Claim 5, wherein the image is a frame of a video stream.
9. (Original): The method of Claim 8, wherein the image intensity is measured in luminance.
10. (Original): The method of Claim 8, wherein the image intensity is measured in luminance and chrominance.
11. (Original): The method of Claim 1, wherein the image is an image-type selected from the group consisting of:
 - animation;
 - computerized banners;
 - real-time streaming video;
 - stored video; and
 - gaming graphics.
12. (Currently Amended): A system for enhancing a digitized image, comprising:
 - a decoder ~~operative~~ configured to receive an encoded digitized image and to expand the encoded digitized image to generate a decoded digitized image;
 - a post-processing unit ~~operative~~ configured to generate a processed image by filtering the decoded digitized image; and
 - an edge enhancer ~~operative~~ configured to detect ~~an~~ a candidate edge and a non-edge in the processed image, determine if the candidate edge is a true edge or a non-edge, and to enhance sharpen the true edge in the processed image by increasing the difference between the true edge and the non-edge, thereby sharpening the true edge.
13. (Original): The system of Claim 12, wherein the edge is a portion of the decoded digitized image separating a first image portion of substantially uniform image intensity from a second image portion of substantially uniform image intensity.

14. (Original): The system of Claim 12, wherein the edge is a line in the decoded digitized image.
15. (Currently Amended): The system of Claim 12, wherein the edge enhancer is further ~~operative~~ configured to detect the edge by comparing a subject portion of the decoded digitized image with a first adjacent portion of the decoded digitized image and with a second portion of the decoded digitized image and determining that the subject portion is associated with a lower image intensity level than a first image intensity associated with the first adjacent portion of the decoded digitized image and a second image intensity associated with the second adjacent portion of the decoded digitized image.
16. (Previously Amended): The system of Claim 12, wherein the post-processor removes an image flaw from the decoded digitized image, in response to a determination that an image intensity of a pixel associated with the image flaw does not differ from at least one surrounding pixel by more than a threshold value.
17. (Original): The system of Claim 12, wherein the post-processor adjusts the image flaw in the decoded digitized image, by modifying an image intensity of a pixel associated with the image flaw to correspond to a median image intensity value of at least one surrounding pixel.
18. (Currently Amended): A method for detecting and enhancing an edge in a decoded digitized image, comprising the steps of:
- determining a first image intensity associated with a first pixel in the decoded digitized image;
 - determining a second image intensity associated with a second pixel in the decoded digitized image;
 - determining a third image intensity associated with a third pixel in the decoded digitized image;

classifying the first pixel as a first candidate edge pixel in response to a determination that the first image intensity is less than the second image intensity and is less than the third image intensity;

determining whether the first pixel is adjacent to a second candidate edge pixel;

determining whether the second pixel is adjacent to a third candidate edge pixel;

classifying a fourth pixel as a non-edge edge pixel;

classifying the first pixel as a true edge pixel in response to a determination that the first pixel is adjacent to the second candidate edge pixel and the second candidate edge pixel is adjacent to the third candidate edge pixel; and

enhancing the true edge pixel by increasing the difference between the true edge pixel and the non-edge pixel, ~~associating a fourth image intensity with the true edge pixel, the fourth image intensity being lower than the first image intensity~~, thereby sharpening the true edge pixel.

19. (Original): The method of Claim 18, further comprising the steps of:

associating a fifth image intensity with the second pixel, the fifth image intensity being higher than the second image intensity; and

associating a sixth image intensity with the third pixel, the sixth image intensity being higher than the third image intensity.

20. (Original): The method of Claim 18, further comprising the steps of:

determining a background color associated with the first pixel;

determining a quality level of the digitized image; and

selecting the fourth image intensity based on the background color and the quality level.

21. (Currently Amended) A method for enhancing a digitized image, comprising the steps of:

receiving an encoded digitized image ~~an encoded digitized image~~;

expanding the encoded digitized image to generate a decoded digitized image;

generating a processed image by filtering the decoded digitized image; and

detecting a non-edge in the processed image;

detecting an candidate edge in the processed image;

determining if the candidate edge is a true edge or a non-edge;

~~to enhance~~ing the true edge in the processed image; ~~by increasing the difference between~~
the true edge and the non-edge, thereby sharpening the true edge.

22. (Previously Presented): The method of Claim 21, wherein the edge is a portion of the decoded digitized image separating a first image portion of substantially uniform image intensity from a second image portion of substantially uniform image intensity.
23. (Previously Presented): The method of Claim 21, wherein the edge is a line in the decoded digitized image.
24. (Previously Presented): The method of Claim 21, wherein the step of detecting an edge further comprises comparing a subject portion of the decoded digitized image with a first adjacent portion of the decoded digitized image and with a second portion of the decoded digitized image and determining that the subject portion is associated with a lower image intensity level than a first image intensity associated with the first adjacent portion of the decoded digitized image and a second image intensity associated with the second adjacent portion of the decoded digitized image.
25. (Previously Presented): The method of Claim 21, further comprising removing an image flaw from the decoded digitized image, in response to a determination that an image intensity of a pixel associated with the image flaw does not differ from at least one surrounding pixel by more than a threshold value.
26. (Previously Presented): The method of Claim 21, further comprising adjusting an image flaw in the decoded digitized image, by modifying an image intensity of a pixel associated with the image flaw to correspond to a median image intensity value of at least one surrounding pixel.